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SOME ACCOUNT OF THE COLONY OF THE CAPE OF GOOD HOPE.



CAFFRES, AND THEIR KRAALS.

## II. THE ABORIGINES.

THE aboriginal inhabitants of the southern extremity of the continent of Africa, may be divided into three principal groups; the Hottentots, the Bosjesmen, or *Bushmen*, and the Caffres. The Hottentots were the original inheritors of the country now forming the colony of the Cape; the Bushmen are the wild tribes of Hottentots driven beyond the boundaries of the colony by the settlers; and the Caffres are a distinct race of warlike natives, possessing the south-eastern portion of the continent beyond the boundary-line of the colony.

We have already stated that, when the country was first colonized by the Dutch, the government used every means in their power, to protect the natives from the aggression of its own subjects; this desire of conciliation was carried so far, that, although a wandering tribe had stolen a number of oxen and murdered the herdsman, a placard was issued, directing them to be treated with more attention and kindness than before. If the intentions of the authorities had been followed up by the exertions of the settlers, the natives would no doubt have been in a far different situation to that in which they are at present. One great source of discontent on the part of the natives was the unfair dealings of the Dutch in the purchase of cattle or merchandise, in which the former were almost always duped. Endeavours were frequently

made to check this evil, by declaring that all dealings with the Hottentots should be conducted openly, and on the part of government; but it was soon found impossible to enforce these laws, and in 1700 a free trade was formally allowed.

The farmers, instead of trading, proceeded in parties of eighty or ninety beyond the boundaries, and being armed, forced the natives (and even murdered them in some instances) to give up their cattle and afterwards divided the plunder.

While the Boors, or Dutch farmers, thus carried their depredations to a great distance in the country of the Hottentots, the government at Cape Town had no choice but to follow the backwoodsmen as far as possible, with the shadow of authority; and thus by slow and inevitable degrees, impelled by a kind of necessity rather than design, wrested an immense extent of territory out of the hands of its aboriginal possessors.

By these means, in the space of 120 years after the foundation of the Dutch colony at the Cape, its territory had increased to more than ten times the extent of the Dutch dominions in Europe.

It being the chief object of the colony to procure cattle and provisions in abundance, the farmers all became cattle-breeders; so that in the course of a single generation, the sober and industrious Dutch peasant, influenced by the circumstances of soil and climate, had become a wandering herdsman, and attained in the fullest degree the adventurous disposition and lawlessness of that mode of life. Against the wishes of government, the Boors marched

onward with continually increasing herds; wherever they found pasture, they made themselves masters of the country, and the colonial government had no part to choose but to follow them and claim the sovereignty of their conquests.

That this mode of treatment should change the character of the Hottentots from that of a kind-hearted and cheerful, to a sullen and discontented people, is not to be wondered at. That their character was naturally mild, we have the authority of old authors to testify; and modern travellers, who have gone beyond the bounds of the colony, state the same fact. Mr. Burchell, in his *Travels in South Africa*, says—

We were joined by five Bushmen, all armed with hassagays and bows; and about a mile further, we overtook a party of seven women; they carried in their hands a straight and thin walking-stick, taller than themselves, and besides this a shorter and a stronger one, for the purpose of digging up such eatable bulbs as they might chance to meet with in their way. Some were encumbered with a child, which they carried at their back; yet they trudged on as merrily as the rest of their companions, without the least symptom of being fatigued. They all looked contented, and I think I may say they were happy, for they bore the appearance of it in their countenances, and I do not think they are yet so civilised and artificial, as to conceal care and misery under the outside garb of gaiety and contentment. Every sentiment of distrust had vanished; they considered us as acquaintances, whose sincerity had been proved, and I now began to feel myself quite at ease in their company.

The traveller had previously been with this party when a hippopotamus had been killed, of whose flesh the natives had made an excellent feast, although their mode of eating was rather disgusting. One of those present, a kind of Hottentot belle, is thus described, showing that fondness for finery is not confined to civilised countries.

Among these happy dirty creatures, was one who, by her airs and dress, showed she had no mean opinion of her personal accomplishments; she was, in fact, the prettiest young *bush-girl* I had yet seen; but her vanity, and too evident consciousness of her superiority, rendered her less pleasing in my eyes, and her extravagance in dress made her, perhaps, a less desirable wife in the eyes of her countrymen; for the immoderate quantity of grease, red ochre, buku, and shining powder, with which her hair was clothed, would ruin any but a very rich husband. Her person, and every part of her dress, was so well greased, that she must have been, in her nation, a girl of good family; and the number of leathern rings with which her arms and legs were adorned, proclaimed her to be evidently a person of property. Round her ancles she carried about a dozen thick rings of this kind, which added to a pair of sandals, gave her the appearance of wearing buskins.

But the most remarkable piece of affectation with which she adorned herself, was three bits of ivory, of the size and shape of sparrows' eggs, loosely pendent from her hair; one in front as low as the point of her nose, and one on the outer side of each cheek, all hanging at the same length. These dangled from side to side as she moved her head, and doubtless made full amends for their inconvenience, by the piquancy which they were thought to add to the wearer's beauty. The upper part of her head was covered with a small leathern cap, fitted closely, but quite unornamented, and I should have had a pleasure in gratifying her with a present of a string of beads, to render this part of her dress more smart, if I had not been fearful that, by doing this, I should excite in her countrymen, an inclination to beg and importune for what I meant to reserve only for the nations further in the interior. Her vanity and affectation, great as it was, did not, as we may sometimes observe in both sexes in other countries, seem to choke her, or produce any alteration in the tone of her voice, for the astonishing quantity of meat which she swallowed down, and the readiness with which she called out to her attendants for more, plainly showed her to be resolved that no squeamishness should interfere on this occasion.

The hardships which are at times endured by the persecuted Bushmen, have been described by many travellers, and will account for, if it does not excuse,

the depredations they at times commit upon the settlers on the frontiers. Burchell, the author we have recently quoted, fell in with a *kraal* of Bushmen, amounting in number to about twenty, who were in a state of abject wretchedness; he describes their abode as merely a cavern in the side of the mountain, sheltered by the overhanging rocks.

They had no earthly possessions whatever, excepting the miserable bit of dirty skin which hung around them, their bows and arrows, a few hassagays, a knife, and two or three ostrich egg-shells. They had not even a hut or a few mats, like most of their countrymen. Neither beads, nor anything for ornament, were to be seen upon them; their persons, meagre and filthy, too plainly bespoke that hunger had often been their lot.

Their food consisted partly of game, which they took, though rarely, in pitfalls, but chiefly of wild roots, (which they dug up in the plains with great labour and after long search,) the eggs of ants, the bodies of snakes and lizards, or an ostrich-egg found occasionally. "Their life, and that of the wild beasts, their fellow inhabitants in the land, were the same. Of both, the only care seemed to be that of feeding themselves and of bringing up their young." The miserable state of these people of course attracted the compassion of the traveller, and four of the men who visited his encampment were invited to partake of his repast.

To feed the hungry is one of the pleasures of a philanthropist; but that pleasure was here somewhat alloyed, by the doglike voracity with which they ate the meat we gave them, and their selfishness in not saving any of it to take home to their families. To this repast we added some pipes of tobacco, which raised their enjoyment to the highest. They squatted on the ground by the fire, with the rest of our people, and remained till late in the evening, before they thought of returning home to their *kraal*. I took my seat amongst them that I might better watch their manners; but finding at last that their smoking absorbed all their thoughts, and created an incapacity as well as disinclination for conversation, I retired to my wagon to try if the sound of my flute would have any effect upon them. With this they expressed themselves pleased, and even took the trouble of coming to the wagon, to see how the music was produced; but the airs, though some of the liveliest, inspired no visible gaiety, nor was the least demonstration of keeping time, by any motion of the body, observable.

To this sad state of apathy and mere brutish feeling had misfortune and distress reduced these unhappy beings; for the natural character of their race, as it is exhibited by those who live further from the frontier of the colony, is distinguished by gaiety and good-temper.

The Hottentots, before they submitted to the yoke of the Dutch, were divided into numerous independent tribes, and possessed a character resembling that of the best-disposed Bushmen, with whom they were no doubt identical, but the state of slavery in which they now exist has, in most cases, destroyed the buoyancy of their disposition, and they are now generally a mild, kind, and timid people.

They are perfectly harmless, honest, and faithful, and, though extremely phlegmatic, they are kind and affectionate to each other, and not incapable of strong attachments. A Hottentot would share his last morsel with his companions. They have little of that kind of cunning that savages generally possess. If accused of crimes of which they have been guilty, they in general divulge the truth. Their idleness (says the same author, Barrow,) is a real disease, whose only remedy seems to be that of terror. Hunger is insufficient to effect a cure. Rather than have the trouble of procuring food by the chase, or digging the ground for roots, they would fast the whole day, provided they may be allowed to sleep. Yet though they are so exceedingly patient of hunger, they are at the same time the greatest gluttons on the face of the earth. Ten of our Hottentots ate a middling sized ox, all but the two

nina legs, in three days, but they had very little sleep during the time, and had fasted the two preceding days. With them the word is to eat or to sleep: when they cannot indulge in the gratification of the one, they generally find immediate relief by flying to the other.

The Caffres, who inhabit the country to the east of our settlements, are a perfectly distinct race from either the Bushmen or Hottentots. From the cast of their countenance, and their warlike disposition, some writers have conjectured that they are not the original inhabitants of the country they possess, and that they are of Arabian origin. The men are extremely tall and well proportioned, many being six feet and more in height; the women are described as possessing good temper, animation, and a cheerful turn of mind, with teeth beautifully white and regular, and without the thick lips or flat noses of most of the natives of Africa, but they form a strong contrast to the men in the lowness of their stature, their figures being short and sturdy.

Every male among the Caffres is accustomed from his youth to the use of the *hassagay*, (spear,) and never leaves his home without taking one or two of these weapons in his hand. In their disputes with the settlers, they have shown great perseverance and courage, and been the cause of much bloodshed and outrage on both sides; but it is to be hoped that the more conciliatory measures which are now in progress will prevent any of these ill consequences for the future.

We shall reserve an account of the manners and customs of the natives, and the natural history of the country, for a future paper.

## THE YOUNG CHEMIST.

### No. VIII.

THE "burning of a candle" afforded us a good deal of chemical information\*; now let us see what we can learn from the every-day operation of "striking a light with flint and steel."

If I strike the steel sharply with the edge of the flint, I get plenty of bright sparks:—What are these sparks? Why, the chemist finds that they are little chips of *burning steel*.

Heat is a very singular agent, and we can evolve it in a great many ways. *Friction*, or rubbing, is a fertile source of heat; if you rub a smooth metal button on the table, pretty hard, two or three times, the button will soon get very hot, because by this friction, or rubbing, you have forced heat out of it.

Well, then, *striking* the steel with the flint is only another sort of friction or rubbing, more momentary it is true, but far more violent, and therefore heat of very great intensity is forced out of both substances.

The flint is *harder*, very much harder, than the steel, and, therefore, it cuts off little chips of steel, at the same moment that heat is suddenly forced out by the same blow; these little chips are so excessively hot, that they are enabled to take fire and burn.

Look at the sparks that fly off in such abundance from the knife-grinder's wheel, when he is grinding a knife or a pair of scissors; well, they are little chips of steel, torn or cut off by the friction of the grindstone, (a variety of flint,) and being very hot, they burn exactly like the chips from the steel we are talking about.

When the steel has been very long in use, we find that it is very much worn away; and this is another proof that a vast many chips must have been cut off by the oft-repeated strokes of the flint.

I dare say it appears strange that I should talk of *steel burning*, for, according to common notions, it is by no means a *combustible* body; you may very likely ask me why the steel bars of the fire-grate do not burn away when there is a fierce fire behind them, for this at first sight appears to be a much more reasonable matter to expect, than for a chip of cold steel to burn upon the stroke of a cold flint.

The reason is this,—although we have there in that grate a fierce fire burning, yet the steel bars are not exposed to anything like the intensity of the heat that we produce *suddenly* by the friction of the flint; and another thing must be borne in mind, namely that the grate-bars are large pieces of metal, of very close and compact texture, and, therefore, even if heated high enough, they could only burn on their external parts, because the air could not devour them suddenly, as is the case with the little chips of steel.

A simple experiment will enable you better to understand this. Here is a large steel knitting-needle, I thrust it into the hottest part of our parlour-fire, and yet it will not burn. I now let it cool, and then with a very fine file reduce part of it into filings. I must here use a few hard words. That power which holds the steel together in its close and compact state, is called the *attraction of aggregation*, or the *attraction of cohesion*. But when I reduce part of the steel into filings, I destroy its attraction of aggregation or cohesion to a very great extent; and if I now throw a pinch or two of the filings into the clear fire; they will burn almost as brilliantly as the chips of steel struck off by the flint, because being very minute fragments, dust, as it were, they are *suddenly heated throughout*, and the air excites them into combustion.

The steel is not changed in its nature by being filed, simply its attraction of aggregation is destroyed to some extent, and chemical action, for such is combustion, is enabled to take place.

I think I have now said enough to convince you, that the sparks produced in "striking a light" are little chips of burning steel; but they are only momentary, and in order to render them of any use, they must fall upon something or other which will ignite very easily; we accordingly find *tinder* employed for this purpose, which is nothing more than *charcoal* in a light and porous form, resulting, as everybody knows, from the partial burning of a bit of linen or cotton rag.

Now it is the property of charcoal, or *carbon*, in this state, to catch and retain the slightest spark of fire, and, therefore, when the chips of burning steel touch the tinder, it instantly becomes red-hot at the points of contact. Now the red glowing is due to the slow burning of the carbon; but see, if I blow upon the tinder, how much more brilliantly it glows, and how much more quickly it consumes, because I supply it with more air than it can otherwise get. But it never bursts into *flame*, blow on it as much as you please, and for why?—Because all the volatile inflammable matters of the piece of rag have been already burned in making it into tinder; the fixed inflammable matter, namely the carbon, is left behind, and cannot be fanned into a flame by the breath. Now if I only partially burn a piece of rag, or scorch it in some places, and then let the sparks of the steel fall upon them, and then blow, you will find that I soon fan the tinder into flame; I mean that those parts which are not scorched will readily burn, and from the flame that they produce I can light the wick of this candle, which I could not do with perfectly-made tinder.

Cabinet-makers make their tinder of very thin

\* See *Saturday Magazine* Vol. IX., pp. 23, 68; Vol. X., p. 92.



deal-shavings, only partially burned; they strike fire on them, the perfectly charred parts ignite and glow, and by blowing upon them the heat becomes sufficient to kindle the uncharred shavings, and thus they obtain a flame without the aid of a match.

Matches always accompany flint, steel, and tinder, in the common tinder-box, and the chemical philosophy of matches is this. The material with which they are tipped is *brimstone*, or *sulphur*, a very singular substance, which has the property of inflaming at a very low degree of heat. Thus, when I apply the sulphur-tip of this match to the red-hot tinder, it immediately takes fire, and burns with a pale blue flame, which gradually becomes larger and hotter, and at length is hot enough to set fire to the wood of the match. When sulphur first begins to burn, its flame is by no means very hot; I cannot light the wick of this candle from the small blue flame, but if I allow it to burn longer, and its heat to get stronger, then it will light the wood on which it is placed, or the wick of the candle.

The peculiarly suffocating smell that sulphur produces when burning, is due to its union with the *oxygen* of the air, producing a vapour which the chemist calls *sulphurous acid*. This substance has some very curious properties; it would be out of place to describe them here, but I will do so at a future opportunity.

Well, then, let us sum up the chemical philosophy of "striking a light." In the first place, by a violent stroke of the *flint* we cut off, and, at the same time, *heat* chips of *steel*, hot enough to burn; we catch these on *charcoal*, which slowly burns *without flame*, or smoulders, to use a common expression, and at this smouldering heat the *sulphur* tip of the match instantly burns *with flame*, this communicates to the wood, and thus we get a flame, from which we may light the candle.

When, therefore, we "strike a light," we have an opportunity of observing four kinds of combustion.

1. That of the *metal*, while hot and sparkling.
2. That of the *charcoal*, red-hot and glowing.
3. That of the *sulphur*, with flame, blue and pale.
4. That of the *wood*, with flame, yellow and luminous.

Books are faithful repositories, which may be awhile neglected or forgotten: but when they are opened again, will again impart their instruction. Memory, once interrupted, is not to be recalled. Written learning is a fixed luminary, which after the cloud that has hidden it has passed away, is again bright in its proper station. Tradition is but a meteor, which, if it once falls, cannot be rekindled.—JOHNSON.

THERE are those to whom a sense of religion has come in storm and tempest; there are those whom it has summoned amid scenes of revelry and idle vanity; there are those, too, who have heard its still small voice amid rural leisure and placid retirement. But, perhaps, the knowledge which causeth not to err is most frequently impressed upon the mind, during the seasons of affliction; and tears are the softened showers which cause the seed of heaven to spring, and take root in the human heart.—SIR WALTER SCOTT.

We ought not to be careless and indifferent about the future. But as there are goods in life possible to be obtained, and evils capable of being avoided, so we should provide ourselves with proper means to obtain the one, and to escape the other. Watchfulness and industry are natural virtues, and recommended to us in Scripture by the conduct even of brute creatures. Whilst we neglect our own interest, we deserve the calamities which come upon us; and have no reason to hope for the compassion of others, when we take no care of ourselves.—BISHOP CONYBEARE.

## AMUSEMENTS OF SCIENCE.

### NO. II. GEOMETRY.

THE term Geometry is derived from a Greek word, meaning, the science of land-measuring, the rules of this science being chiefly applied to that purpose. In common conversation the term is usually applied to the art of drawing geometrical figures; with this part of the subject, which is explained in so many elementary works, we have nothing to do; but there are a few amusing problems which, perhaps, may interest our young readers.

Much instruction may be obtained from a knowledge of the forms of the regular geometrical solids, and it is as well to know how to construct them, at a cheap cost, of a light material, and with perfect accuracy. There is nothing better for this purpose than moderately thick Bristol board; the following figures show how the board may be cut, so as to form each figure out of one piece. Where the lines are drawn, the board is to be cut partly through with a pen-knife, so as to render the angles of the model as sharp and straight as possible; the edges which require joining are to be fastened together with a slip of thin paper and gum Arabic, dissolved in just sufficient water to bring it to the consistence of treacle. Fig. 1,

Fig. 1.

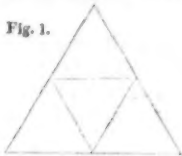
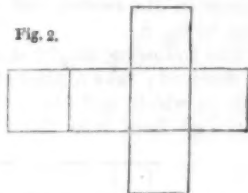
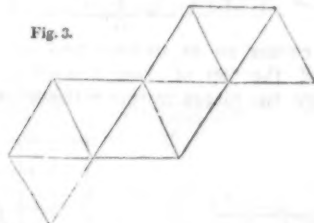


Fig. 2.



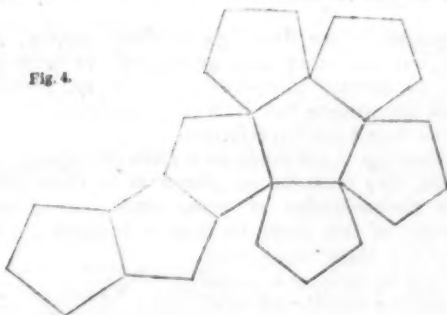
will form a *tetraëdron*, a figure with four sides, each shaped like an equilateral triangle. Fig. 2, forms a

Fig. 3.



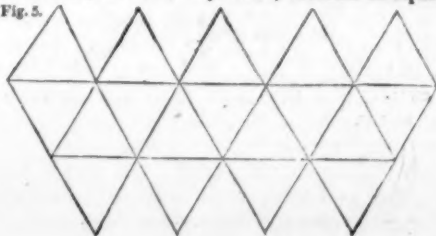
cube or *hexaëdron*. Fig. 3, an *octaëdron*, with eight triangular sides. Fig. 4, a *dodecaëdron*, with ten sides,

Fig. 4.



shaped like pentagons, of five equal sides. Fig. 5, an *isocaëdron*, with twenty sides, formed of equilateral

Fig. 5.



triangles. Fig. 6, will form a pyramid with six sides, but the number of sides may be varied; or if the pasteboard is cut merely as a half circle, it will form a cone; but in this case; a small circle of pasteboard must be prepared, to form the base; the size of this circle is determined by taking in the compasses rather more than one-sixth of the line  $AB$  for its radius. Our economical reader may, in the next problem, see how to make five small squares into one large one, without the waste of an inch of stuff. Suppose you have five squares of cloth, or anything else, as fig. 7; find the centre of one side of each of four of these squares, and cut them from that

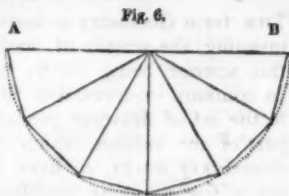
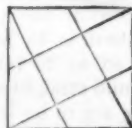


Fig. 7.

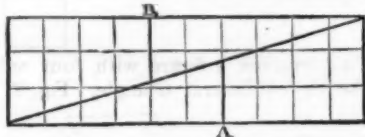


Fig. 8.



point to the opposite corner, then place the perfect square in the centre, and the other pieces round, as seen in fig. 8.

The following sleight shows how easily the eye may be deceived; take a piece of pasteboard an inch and a half in width, and five inches in length, and divide it by inked lines into thirty squares, then cut it from



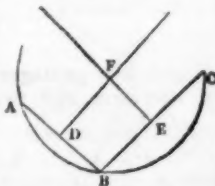
corner to corner so as to form two triangles; after this, cut off the top of these triangles at  $A$  and  $B$ , and arrange the pieces in this manner: on counting



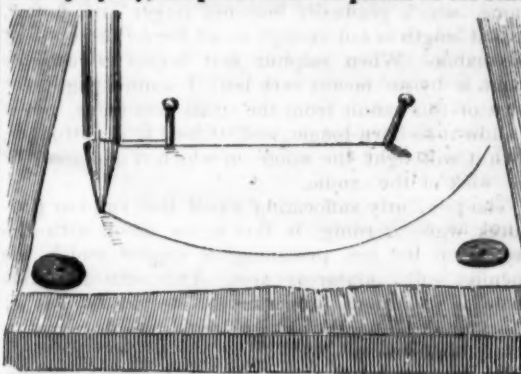
the squares in the first figure, there appears to be thirty, but the other arrangement of the same card seems to contain thirty-two; it does so, however, only in appearance, but it is only a very correct eye that can detect the imperfection.

If three spots are made on a piece of paper in any position, they must be so placed as to form points in the circumference of some circle; to discover the centre of this circle, do thus:—Suppose  $A$ ,  $B$ , and  $C$  to be the three spots, connect them by the lines  $AB$ , and  $BC$ ; find the middle points of each of these lines at  $E$  and  $D$ , draw the lines  $EF$  and  $DF$  perpendicular to  $AB$  and  $BC$ , these lines will intersect each other at  $F$ , which will be the centre of the circle, whose circumference will pass through the three spots  $A$ ,  $B$ , and  $C$ . To discover the centre of a circle, or of a portion of a circle, when it is unknown, the same rule may be applied, by merely making three spots in the circumference, and proceeding in the manner just noticed.

Although an oval is a figure often formed by means



of the compasses, it never can be accurately drawn in that manner; the simple plan following is by far the most correct. Stick two pins through the paper, previously strained on a drawing board, and fasten a piece of thread to each as shown in the engraving; having cut a notch near the point of a finely-pointed pencil, for the purpose of receiving the thread, hold the pencil perfectly upright, and placing the thread in the notch, trace one-half of the oval, this will be accurately performed by keeping the thread on the stretch, and moving the pencil steadily; the thread must then be passed to the other side of the pins, or more properly, the pencil must be placed on the other



side of the thread, and the other half of the oval completed. As ovals vary in the proportion of their width, the length of the thread, and the distance between the pins, must be adjusted accordingly.

#### VOYAGE OF A BOTTLE.

My readers may all recollect the melancholy incident of the burning of the Kent East India ship in the chops of the British Channel some few years ago. On board of that ship was Lieutenant-Colonel Mac Gregor, now of the 93rd Highlanders, who was going out with the regiment he then commanded to India. When all hope of saving the ship was at an end, and death seemed inevitable, the Colonel sat down, and wrote a short narrative of what had occurred, and the little probability that existed of any person being saved. This paper was put into a bottle, and while he was in the act of corking that bottle, so as to secure the writing, the cry of "a ship in sight," was heard. What became of the bottle after that moment he had no recollection; but about three or four years ago he went out to Barbados to take the command of his present corps, and shortly after his arrival at St. Ann's, he was waited on by a gentleman connected with one of the newspapers published in Bridgetown, and who, after some little explanation, presented to the Colonel his original manuscript from on board the Kent, which had been found in a bottle picked up by a negro on the northern shore of the island. It must have been the existing current that brought this bottle from the British Channel to the shores of Barbados.—SIR ANDREW HALLIDAY'S *West Indies*.

I do not think that the inhabitants of southern countries have generally much taste for picturesque beauty. I remember seeing a house, not far from Cintra, overhung by one of the most magnificent cork-trees I ever beheld. I was standing opposite the windows, admiring the fantastic beauty and amazing luxuriance of the tree, when an old woman, attracted by my earnest gaze, sallied forth, observing that I was, perhaps, desirous of taking the house; and adding, that if the tree were an object of dislike, it could be felled immediately. Any old woman may be guilty of bad taste, but if the tree had been an object of general admiration in the neighbourhood, she would not have so utterly misunderstood my feeling.—*Portugal and Galicia*.

This life will not admit of equality; but surely that man who thinks he derives consequence and respect from keeping others at a distance, is as base-minded as the coward who shuns the enemy from the fear of an attack.—*GOETHE*.

## COLOURED SPECTACLES.

WHEN the eyes are weak, the use of coloured spectacles, under strong lights, is a proper precaution.

For a long time green spectacles were in use to screen the eyes, but the disagreeable colour which they impart to objects caused them to be superseded by blue glasses. There is, however, a great objection even to blue spectacles; they do not mitigate the blue rays, which fall upon the retina in their natural intensity, so as to distress the sight when directed towards white surfaces strongly illuminated,—such as snow, or stuccoed houses, or the flag-stones of pavement under a summer sun. To obviate this prejudicial effect, (necessarily, indeed, belonging to all coloured spectacles,) I have had made *gray* spectacles, the effect of which is extremely pleasant, when the sight is weak. The same object has been aimed at in the introduction of gauze spectacles; but these are found to have a different but equally serious disadvantage, they *heat* the eyes. The gray glasses made by my direction are a *pure black* diluted\*. This is not as easily obtained as might be supposed; for almost all the black glass in use for beads, and the like, black as it appears, is either a deep red or a deep blue.

A child which was under my care, and which had temporarily lost its sight from the intense glare of lightning, in the progress of recovery, for a time saw all in shade. Everything was one colour; she could read with a strong light, but could not tell yellow from blue or red. Afterwards the discrimination of colour returned.

No one should keep his eyes directed to a fire, or lamp, or candle, (which one has a natural tendency to do,) or habitually sit facing a window with a bright light, or expose his eyes to sudden and violent transitions from light to darkness, or the reverse. Candles are better than lamps with shades, to read by, because they avoid this alternation, and their light is less intense. A medium should be sought in artificial light between that which is so bright as to fatigue, and so imperfect as to strain, vision.

The use of glasses is, if possible to be avoided. The sight admits of being strengthened by exercise. Vision which is slightly defective, or disposed to short-sightedness, may be recovered, and its sphere extended by use; whereas, the constant employment of glasses is sure to contract its range more and more. This is very evident in those who use a single eye-glass; in that case the vision of the right eye (being the eye to which the glass is commonly applied) gradually becomes more defective than that of the left. The increase of short-sightedness in the present day is owing to the joint influence of increased habits of reading, and the use of glasses.

On the other hand, the occasional use of glasses, by either young or old, whose vision is defective, contributes to strengthen the sight; in one way, by relieving the nerve from the strain of imperfect vision; in another, by teaching the retina what perfect vision is.

[Abridged from MAYO's *Philosophy of Living*.]

\* There have been unexpected difficulties in making a colourless shaded-glass. Mr. DOLLOND has, however, at last, succeeded completely in this object.

It is, doubtless, hard to die; but it is agreeable to hope we shall not live here for ever, and that a better life will put an end to the troubles of this. If we were offered immortality on earth, who is there would accept so melancholy a gift? What resource, what hope, what consolation, would be left us against the rigour of fortune, and the injustice of mankind?

## POPULAR LEGENDS AND FICTIONS.

## X.

THE general belief in fairies throughout Europe, shows that in early times, our ancestors had reduced the whimsical notions respecting these fabulous beings to a sort of system, consistent and regular, in some respects, as many parts of the heathen mythology; a sufficient proof of the great antiquity of such superstitions. Mankind, indeed, and more especially the common people, could not have been so generally agreed in these arbitrary notions, had they not prevailed for many ages. So ancient, are these superstitions among the Saxons, that, long before this people left their German forests, they believed in the existence of a kind of diminutive demons or spirits, which they denominated *Dvergar*, or Dwarfs, and to which they attributed many wonderful performances, beyond human art and capability. These fables did not die away as they floated down the stream of time, but for ages continued to be implicitly believed by the simple and untutored peasantry.

In a fine old song, attributed by Peck to Ben Jonson, although not to be found among that author's collected works, we have a tolerably succinct account, and, at all events, a very amusing one, of the credited capacities of the fairy-tribe. We quote a few of the verses: Robin Goodfellow sings:—

More swift than lightning can I fly  
About this æry welkin soone,  
And in a minute's space descry  
Each thing that's done below the moone;

There's not a hag  
Or ghost shall wag,

Or cry,—“Ware goblin!” where I go;  
But Robin I

Their feates will spye,

And send them home with Ho! ho! ho!

Whene'er such wanderers I meete,  
As from their night sportes they trudge home;

With counterfeiting voice I greeke,

And call them on with me to roame.

Through woodes, through lakes,

Through bogges, through brakes;

Or else unseene with them I go,

All in the nicke

To play some trick,

And frolicke it with Ho! ho! ho!

Sometimes I meete them like a man;

Sometimes an ox, sometimes a hound;

And to a horse I turne me can,

To trip and trot about them round:

But if to ride,

By back to stride,

More swift than winde away I go,

O'er hedge and lands,

Through pools and ponds,

I whirry, laughing Ho! ho! ho!

When lads and lasses merry be,

With possets and rich juncates fine,

Unseene of all the companie,

I eat their cakes and sip their wine,

And to make sport

I puff and snort,

And out the candle I do blow;

The maids I kiss,

Their shrieks—Who's this?

I answer nought but Ho! ho! ho!

Yet now and then, the maids to please,

At midnight I card up their wool;

And while they sleepe and take their ease,

With wheel to threads their flax I pull.

I grind at mill

Their malt up still,

I dress their hempe and spin their tow;

If any walke

And would me talke,

I wend me, laughing Ho! ho! ho!



When men do traps and engines set  
 In loopholes, where the vermines creep  
 Who from their fields and houses get  
 Their ducks, and geese, and lambs, and sheep:  
     I spy the gin  
     And enter in,  
 And seeme a vermine taken so  
     But when they theare  
     Approach me neare,  
 I leape out, laughing Ho! ho! ho!

In the earlier ages, fairies were not supposed to be subservient to any earthly power; but as men became more enlightened, the influence of the sorcerers extended, in some measure, to them, as well as to the vulgar and debased sorts of spirits. Among the Ashmolean manuscripts, there is a recipe for the conjuration of fairies, which will probably remind our readers of the incantations applied to witches. It is used by an alchymist (we need not say with what success), who wanted a fairy to assist him in the grand scheme of transmuting metals\*.

*An excellent waie to get a Fayrie.*

First get a broad square christal, or Venice glasse, in length and breadth three inches. Then lay that glasse or christall in the blonde of a white henne, three Wednesdays or three Frydayes. Then take it out, and wash it with holie aq., [holy water] and fumigate it. Then take three hazel stickes, or wandes of a yere groth: pill them faire and white, and make [them] so longe as you write the spirit's or fairie's name, which you call three times, on every stick being made flat on one side. Then burye them under some hill, whereas you suppose fayries haunt, the Wednesday before you call her. And the Frydaye following take them uppe, and call her at eight or ten, or three of the clock, which be good planetts and houres for that turne: but when you call *be cleane in life, and turn thy face towards the East*; and when you have her [*i. e.* the fairy], binde her to that stone or glasse.

We have already observed, that the origin of fairies among the Saxons is involved in obscurity. Bourne, however, supposes the superstition to have been handed down by tradition from the *Lamie* of antiquity, who were esteemed so mischievous and cruel as to steal and devour young children: these, he says, together with the fauns, seem to have formed the notion of fairies. Others deduce them from the *Lares* and *Larvæ* of the Romans†; and others, again, conjecture that these diminutive aerial people were imported into Europe by the Crusaders from the East, as in some respects they resemble the oriental genii. The Arabs and Persians, indeed, whose religion and history abound with relations concerning them, have assigned to them a peculiar country, and called it fairy-land.

But although we cannot, with any degree of accuracy, trace the origin of fairies, among the Saxons, to any precise period, we find them among the Britons of a very ancient standing. Their existence is alluded to by the oldest of the British bards; and Taliessin and Merddin make frequent mention of two species; the one fixing their abodes in glades and green meadows; the other frequenting mountains and deep woods.

That their origin may be deduced from the Druids, is, perhaps, probable. The fairy customs are so systematic and general, that they evidently indicate the operations of a body of people, acting in concert, and living mysteriously. All their actions are those of a consistent and regular policy, instituted to prevent discovery, as well as to inspire fear of their power, and a high opinion of their beneficence. Accordingly, tradition notes that, to attempt to discover them, was to incur certain destruction. "They are fairies,"

says the gallant Falstaff; "he that looks on them shall die." They were not to be impeded in ingress or egress: a bowl of milk was to be placed for them at night on the hearth; and, in return, they left a small present of money, if the house was kept clean; if not, they inflicted some punishment on the negligent, which, as it was death to look upon them, the offenders were obliged to endure, and, no doubt, many mischievous tricks were played upon these occasions. Their general dress was green, that they might be the better concealed; and, as their children might have betrayed their haunts, they were permitted only to go out in the night-time, and to entertain themselves by dancing in the moonlight. These dances, like those about the May-pole, were performed round a tree, and on an elevated spot, beneath which was probably their habitation, or its entrance. The elder persons mixed as much as they dared with the world; and if at any time recognised, the certainty of their vengeance became their preservation.

A particular spot on the summit of the celebrated Merionethshire mountain, Cader Idris, is believed to have been, in times of yore, the scene of many a fairy revel. It is marked by an irregular enclosure of stone, the remains, as it would seem, of some ancient tumulus, or *carnead*; and tradition has fondly bestowed upon it the appellation of Bedd Idris, or the grave of Idris. Since the death of the princely guardian of the rocky fortress, this lonely spot has become doubly hallowed in the estimation of the neighbouring rustics, by being frequented by the *Tylwyth Teg*\*, whose nocturnal gambols are professed to have been witnessed by more than one individual, and were formerly believed to have been far more common than they are now. There is, certainly, something exceedingly impressive in this rude and desolate enclosure, situated as it is, on the lofty summit of this magnificent mountain. It is said, and, strange to say, has been believed, that whoever reposes within its hallowed circle, will awake either bereft of reason, or gifted with poetical genius.

And some who stand the night out on the hill,  
 Have said they heard,—unless it was their dream,  
 Or the mere murmur of the babbling rill,—  
 Just as the morn-star shot its first slant beam,  
 A sound of music just as they might deem  
 The song of spirits,—that would sometimes sail  
 Close to their ear, a deep, delicious stream;  
 Then sweep away, and die with a low wail;  
 Then come again, and thus, till Lucifer was pale.

With regard to the rites of the fairies, particularly that of dancing round a tree, as well as their character for truth, probity, and above all, virtue,—they may be referred to a Druid origin; and as the Druidical was one of the most ancient religions, so it must have been one of the first that was persecuted; and we can readily conceive how necessary it must have been for its followers to ensure their safety, by adopting a secure, as well as an extraordinary, mode of concealment. These suggestions, for which we are indebted to the *Cambrian Popular Antiquities*, are worthy of consideration on the score of their probability. All speculative deductions must necessarily be imperfect; but it has been plausibly urged, that the origin of fairies in Britain is to be deduced from the subversion of that religion which preserved such a mingled character of barbarous bigotry on the one hand, and of elevated morality on the other.

**KNOCKERS, OR SPIRITS OF THE MINE.**

NEARLY allied to the fairies, is another species of aerial beings called **KNOCKERS**. These, the Welsh miners solemnly affirm, are heard under ground, in

\* See the papers on the *Philosophers' Stone*, commencing at page 172 of the present volume.

† See *Saturday Magazine*, Vol. X., p. 174.

\* See *Saturday Magazine*, Vol. X., p. 198.

or near mines; and by their *knocking*, generally point out to the workmen a rich vein of ore. In the third volume of *Selections from the Gentleman's Magazine*, there are two letters on the subject of *Knockers* in mines, written in 1754, by Mr. Lewis Morris, a gentleman esteemed no less for his learning than for his benevolence.

People (he gravely says,) who know very little of arts and sciences, or the powers of Nature, will laugh at us Cardigan-shire miners, who maintain the existence of *knockers*, in mines; that is to say, they are the types or forerunners of working in mines, as dreams are of some accidents which happen to us. Before the discovery of *Esgair y Mwyn* mine, these little people worked hard there day and night; and there are abundance of honest, sober people, who have heard them: but after the discovery of the great mine, they were heard no more. When I began to work at *Llwyn Llwyd*, they worked so fresh there for a considerable time, that they frightened away some young workmen. This is when we were driving levels, and before we had got any ore; but when we came to the ore, they then gave over, and I heard no more of them. These are odd assertions, but they are certainly facts, although we cannot and do not pretend to account for them. We have now very good ore at *Llwyn Llwyd*, where the knockers were heard to work; but they have now yielded up the place, and are heard no more. Let who will laugh; we have the greatest reason to rejoice, and thank the knockers, or rather God, who sends us these notices.

#### A RIDDLE.

Know ye that magic coral cave,  
Which neither soas nor rivers lave,  
Yet in it water oft is found,  
Although raised high above the ground,  
Nor comes it from the earth or sky,  
And scarce the Summer's heat can dry?  
Its arched roof of rosy hue,  
Is almost hidden from the view;  
The red soft floor of this dark cave,  
Heaves like the gentle Arno's wave.  
Within the entrance glistening stand,  
Arrayed in white a crescent band,  
Guards also from the roof depend,  
Aiding the portal to defend,  
Form a portcullis when they meet,  
Preventing entrance and retreat.  
Security has still done more,  
Placing without a folding door,  
Which opening slow or quick, no eye  
Its noiseless hinges can descry.  
Within this double-guarded cell,  
Lo, witchery and wonder dwell!  
For when the portal's opened wide,  
Thence flows of various sounds a tide;  
Accents of sorrow, grief, and fear,  
Of joy and gladness, strike the ear,  
The swell of praise, the breath of prayer,  
The dismal howling of despair,  
The din of revelry and strife,  
The moan which 'scapes with ebbing life,  
The boist'rous laugh, the piercing shriek,  
The gurgling sob when heart-strings break,  
Each tone known to the human voice,  
When men bewail, despair, rejoice,  
Sounds from the east, west, south, and north,  
From that red cavern issue forth.  
'Tis th' ante-chamber to a tomb,  
On which shines neither sun nor moon,  
Connected by a narrow strait,  
It lies beneath the cavern's gate.  
Within this tomb a monster lies,  
Which through that pass receives supplies,  
Of food for his voracious maw,  
Nor owns he any other law  
Than Appetite, and if not fed,  
To acts of mutiny is led.  
By some he's worshipped as a god,  
And rules them with an iron rod.  
Homage the Cave receives, e'en this,  
Its vot'ries greet it with a kiss.—D. E.

#### MUSICAL INSTRUMENTS. No. VI.

##### THE ÆOLIAN HARP—MUSICAL GLASSES— MUSICAL SNUFF-BOXES.

THE Æolian Harp is well known; it is composed of an oblong-square box, made of very thin deal, of the same width as the window in which it is to be placed, and about five inches deep and six inches wide. Over the upper surface of this box, which is pierced with



sounding-holes like the sounding-board of a violin, are stretched several catgut, or wire strings, of an equal length, but of different thickness. These strings are tuned in unison with the lowest note that the smallest string can produce, when properly stretched. The instrument is then placed on the sill of the window, and the casement brought down so as nearly to touch the strings; thus placed, the action of a gentle breeze will cause it to emit the most agreeable combination of wild and melting sounds, "changing from one harmonic of the string to another, according to the varying impulse of the wind, and its unequal action on the different parts of the vibrating string." The instrument may be used out of doors, if a covering of wood is placed a little above the strings.

A very curious apparatus, which has received the name of the Gigantic Meteorological Æolian Harp, was arranged in 1787. The inventor, M. Ventan, Provost of Burkli, not far from Basle, stretched above his garden fifteen iron wires, each 320 feet long, and at the distance of about two or three inches from one another; the largest was one-sixth of an inch in thickness, and the smallest the twelfth of an inch; they were placed in the direction of north and south, and inclined in such a manner as to form an angle of twenty or thirty degrees with the horizon, being stretched by means of rollers properly disposed for the purpose. Whenever the weather changed, these wires sounded with such loudness, that it was impossible to go on with a concert in the house. "The sounds sometimes resembled the hissing noise of water in rapid ebullition, sometimes that of a harmonicon, and sometimes that of a distant chime or organ." A brass wire produced no effect, nor did an iron wire when stretched from east to west. The sounds produced in this instance are supposed to have some connexion with electricity or magnetism.

The harmonica, or musical-glasses, produce sounds of very great sweetness. As many glasses, gradually varying in size, are chosen, as you wish to have different notes. These are fixed on a wooden frame in regular order, and tuned by pouring more or less water into them, which depresses the sound more and more; the glasses are played by passing the wetted finger round the rim.

The musical snuff-boxes have a barrel pricked with brass pins like that of an organ; these pins lift, when the barrel revolves, a series of steel springs of different lengths and thicknesses, and the vibration of these springs, when released, produces the different notes.

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